

What is claimed is:

1. A computer-resource allocation method adopted by  
a computer system allocating a computer resource to a  
5 plurality of computers executing programs independently of  
each other, said method comprising the steps of:

(1) collecting states of computer-resource  
utilizations of said computers;

10 (2) computing coefficients of correlation among said  
computers with respect to said computer-resource  
utilizations of said computers on the basis of data  
representing said collected states of computer-resource  
utilizations; and

15 (3) computing computer-resource allocation  
quantities of said computers on the basis of said collected  
states of computer-resource utilizations and said computed  
coefficients of correlation and allocating said computer  
resource to said computers in accordance with said  
computer-resource allocation quantities.

20 2. A computer-resource allocation method according  
to claim 1 wherein said step (3) includes the sub-steps of:

forecasting states of computer-resource utilizations  
of said computers on the basis of data representing said  
collected states of computer-resource utilizations; and

25 allocating said computer resource to said computers

in accordance with said forecasted states of computer-resource utilizations and said computed coefficients of correlation.

3. A computer-resource allocation method according  
5 to claim 1 wherein said step (3) includes the sub-steps of:

determining one of said computers as a specific computer requiring a larger allocated quantity of said computer resource;

10 setting a decrease in quantity for each of said computers at such a value that, the smaller the coefficient of correlation with said specific computer, the larger the value;

15 subtracting said decrease in quantity from a quantity of said computer resource allocated to each of said computers except said specific computer; and

transferring said decrease in quantity subtracted from said quantity of said computer resource allocated to each of said computers to said specific computer.

4. A computer-resource allocation method according  
20 to claim 1 wherein said coefficients of correlation are switched from one values to others in dependence on a time frame and characteristics of programs running on said computers.

5. A computer-resource management server for  
25 managing allocation of a computer resource in a computer

system allocating said computer resource to a plurality of computers executing programs independently of each other, said computer-resource management server comprising:

5 a resource utilization state data collection unit for collecting states of computer-resource utilizations of said computers;

10 a correlation-coefficient computation unit for computing coefficients of correlation among said computers with respect to said computer-resource utilizations of said computers on the basis of data representing said collected states of computer-resource utilizations; and

15 a resource allocation unit for computing computer-resource allocation quantities of said computers on the basis of said collected states of computer-resource utilizations and said computed coefficients of correlation and allocating said computer resource to said computers in accordance with said computer-resource allocation quantities.

6. A computer-resource management server according to claim 5, said computer-resource management server further having a computer-resource-utilization-forecasting unit for forecasting states of computer-resource utilizations of said computers on the basis of data representing said collected states of computer-resource utilizations, wherein said resource allocation unit

allocates said computer resource to said computers in accordance with said forecasted states of computer-resource utilizations.

7. A computer-resource management server according  
5 to claim 5, wherein said resource allocation unit:

determines one of said computers as a specific computer requiring a larger allocated quantity of said computer resource;

sets a decrease in quantity for each of said  
10 computers at such a value that, the smaller the coefficient of correlation with said specific computer, the larger the value;

subtracts said decrease in quantity from a quantity of said computer resource allocated to each of said  
15 computers except said specific computer; and

transfers said decrease in quantity subtracted from said quantity of said computer resource allocated to each of said computers to said specific computer.

8. A computer-resource management server according  
20 to claim 5 wherein said coefficients of correlation are switched from one values to others in dependence on a time frame and characteristics of programs running on said computers.

9. A computer system allocating a computer resource  
25 to a plurality of computers executing programs

independently of each other, said computer system comprising:

    a computer-resource management server for collecting states of computer-resource utilizations of said computers,  
5    for computing coefficients of correlation among said computers with respect to said computer-resource utilizations of said computers on the basis of data representing said collected states of computer-resource utilizations, computing computer-resource allocation  
10    quantities of said computers on the basis of said collected states of computer-resource utilizations and said computed coefficients of correlation, and transmitting said computer-resource allocation quantities; and  
    a control means for allocating said computer  
15    resource to said computers in accordance with said computer-resource allocation quantities received from said computer-resource management server.

10. A computer system according to claim 9 wherein, if a specific one of said computers is determined to be a  
20    computer, to which a larger quantity of said computer resource needs to be apportioned,

    a decrease in quantity is set for each of said computers at such a value that, the smaller the coefficient of correlation with said specific computer, the larger the  
25    value or, the larger the coefficient of correlation with

said specific computer, the smaller the value;

        said decrease in quantity is subtracted from a quantity of said computer resource allocated to each of said computers except said specific computer; and

5       said decrease in quantity subtracted from said quantity of said computer resource allocated to each of said computers is transferred to said specific computer.

11. A computer system according to claim 9 wherein said computer resource allocated said computers is

10     resources pertaining to a plurality of physical computers.